

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 103 - 02875 County Wetzel District Grant
Quad Pine Grove Pad Name PNG129 Field/Pool Name _____
Farm name Coastal Lumber Company Well Number 514378
Operator (as registered with the OOG) EQT Production Company
Address 625 Liberty Ave. EQT Plaza, Suite 1700 City Pittsburgh State PA Zip 15222

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,378,128 Easting 530,866
Landing Point of Curve Northing 4,378,281 Easting 530,541
Bottom Hole Northing 4,379,258 Easting 530,001

Elevation (ft) 1330 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine

Mud Type(s) and Additive(s)

Water base Mud 14.0 ppg barium sulfate, sodium chloride, xanthan gum, polyanionic cellulose, modified starch, sodium hydroxide, phosphonates and alkyl phosphates, glutaraldehyde solution, calcium hydroxide, partially hydrolyzed polyacrylamide/polyacrylate, potassium chloride, sodium carbonate, ground walnut shells, alcohol and modified fatty acid, ferrochrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 05/29/2013 Date drilling commenced 08/27/2013 Date drilling ceased 3/19/2014
Date completion activities began 8/11/2014 Date completion activities ceased 8/18/2014
Verbal plugging (Y/N) n/a Date permission granted n/a Granted by n/a

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 734' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 2016', 2365' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 686', 968', 1038', 1052', 1080' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

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Reviewed by: _____

01/16/2015

API 47-103 - 02875

Farm name Coastal Lumber Company

Well number 514378

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	28"	26"	40'	New	82.6#/ft	n/a	Y
Surface	17-1/2"	13-3/8"	950'	New	54.5#/ft	112', 430'	Y
Coal							
Intermediate 1	12-3/8"	9-5/8"	3384'	New	40#/ft	1898', 1012'	Y
Intermediate 2							
Intermediate 3							
Production	8-1/2"	5-1/2"	11563'	New	20#/ft	N/A	N
Tubing							
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	49	15.6	1.18	57.82	0	8
Surface	Class A	845	15.6	1.19	1005.55	0	8
Coal							
Intermediate 1	Class A	1520	15.6	1.18	1793.6	0	8
Intermediate 2							
Intermediate 3							
Production	Class A/Class H	690/505	15.2/15.6	1.07/1.86	1677.6	5000	8
Tubing							

Drillers TD (ft) 11,570'

Loggers TD (ft) N/A

Deepest formation penetrated Marcellus

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 5808'

Check all wireline logs run
 caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Conductor-N/A

Surface-bow spring centralizers set at 628', 310'

Intermediate-bow spring centralizers set at 3056', 2551', 2045', 1538', 1031', 525', 20'

Production-composite centralizer ran on every joint from td up to 5300'

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

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Formation Name	Final Top MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm MD (ftGL) (ft)	Final Btm TVD (ft)
SAND / SHALE	0	0	686	686
FRESH WATER ZONE	1	1	734	734
COAL	686	686	688	688
SAND / SHALE	688	688	968	968
COAL	968	968	969	969
SAND / SHALE	969	969	1,038.00	1,038.00
COAL	1,038.00	1,038.00	1,045.00	1,045.00
SAND / SHALE	1,045.00	1,045.00	1,052.00	1,052.00
COAL	1,052.00	1,052.00	1,054.00	1,054.00
SAND / SHALE	1,054.00	1,054.00	1,080.00	1,080.00
COAL	1,080.00	1,080.00	1,086.00	1,086.00
SAND / SHALE	1,086.00	1,086.00	2,183.00	2,183.00
MAXTON	2,183.00	2,183.00	2,419.00	2,419.00
BIG LIME	2,419.00	2,419.00	2,658.00	2,658.00
WEIR	2,658.00	2,658.00	2,856.00	2,856.00
GANTZ	2,856.00	2,856.00	2,972.00	2,972.00
50F	2,972.00	2,972.00	3,045.00	3,045.00
30F	3,045.00	3,045.00	3,092.00	3,092.00
GORDON	3,092.00	3,092.00	3,212.00	3,212.00
4TH	3,212.00	3,212.00	3,347.00	3,347.00
BAYARD	3,347.00	3,347.00	3,763.00	3,763.00
WARREN	3,763.00	3,763.00	3,889.00	3,889.00
SPEECHLEY	3,889.00	3,889.00	4,763.00	4,763.00
RILEY	4,763.00	4,763.00	5,376.00	5,376.00
BENSON	5,374.00	5,374.00	5,758.00	5,758.00
ALEXANDER	5,742.00	5,742.00	7,300.00	7,300.00
MIDDLESEX	7,300.00	7,300.00	7,361.00	7,361.00
GENESSEE	7,361.00	7,361.00	7,509.00	7,509.00
GENESE0	7,509.00	7,509.00	7,571.00	7,190.00
TULLY	7,571.00	7,190.00	7,619.00	7,211.70
HAMILTON	7,619.00	7,211.70	7,852.00	7,287.70
MARCELLUS	7,852.00	7,287.70	11,570.00	7,300.00

514378 - 47-103-02875-0000 - Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	8/11/2014	11,533.00	11,535.00	10	MARCELLUS
1	8/12/2014	11,352.00	11,489.00	32	MARCELLUS
2	8/12/2014	11,128.00	11,310.00	40	MARCELLUS
3	8/12/2014	10,903.00	11,085.00	40	MARCELLUS
3.1 (Re-Perf)	8/12/2014	10,914.00	10,982.00	32	MARCELLUS
4	8/13/2014	10,678.00	10,860.00	40	MARCELLUS
5	8/14/2014	10,453.00	10,635.00	40	MARCELLUS
6	8/14/2014	10,228.00	10,410.00	40	MARCELLUS
7	8/14/2014	10,003.00	10,185.00	40	MARCELLUS
8	8/15/2014	9,778.00	9,960.00	40	MARCELLUS
9	8/15/2014	9,550.00	9,735.00	40	MARCELLUS
10	8/16/2014	9,328.00	9,510.00	40	MARCELLUS
10.1 (Re-Perf)	8/16/2014	9,307.00	9,396.00	24	MARCELLUS
11	8/16/2014	9,103.00	9,285.00	40	MARCELLUS
12	8/16/2014	8,878.00	9,060.00	40	MARCELLUS
13	8/17/2014	8,653.00	8,835.00	40	MARCELLUS
14	8/17/2014	8,428.00	8,610.00	40	MARCELLUS
15	8/17/2014	8,203.00	8,385.00	40	MARCELLUS
16	8/18/2014	7,978.00	8,160.00	40	MARCELLUS

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514378 - 47-103-02875-0000 - Stimulated Stages

Stage Number	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
Initiation Sleeve	8/11/2014	12.10	7,105.00	9,139.00	4,801	NA	913	0
1	8/11/2014	99.40	8,113.00	9,089.00	4,706	372,968	9,375	0
2	8/12/2014	100.10	8,530.00	9,143.00	4,665	375,983	9,887	0
3	8/13/2014	98.20	8,361.00	8,920.00	4,858	748,359	24,168	0
3.1 (Re-Perf)								
4								
5	8/14/2014	98.10	8,512.00	8,973.00	5,588	374,751	11,346	0
6	8/14/2014	99.50	8,417.00	9,129.00	4,739	373,691	9,323	0
7	8/15/2014	100.70	7,821.00	8,647.00	4,244	376,720	9,150	0
8	8/15/2014	91.20	8,631.00	9,253.00	4,817	375,900	10,154	0
9	8/16/2014	100.50	7,873.00	8,718.00	4,388	374,600	8,653	0
10	8/16/2014	100.70	7,548.00	8,805.00	4,937	745,600	20,566	0
10.1 (Re-Perf)								
11								
12	8/17/2014	101.20	7,965.00	9,007.00	5,623	372,600	8,777	0
13	8/17/2014	100.10	8,145.00	8,884.00	4,449	375,212	9,494	0
14	8/17/2014	100.40	7,487.00	9,051.00	4,665	375,000	8,651	0
15	8/18/2014	100.90	8,527.00	8,962.00	4,738	377,400	8,564	0
16	8/18/2014	100.30	8,441.00	9,132.00	4,925	375,603	10,186	0

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/11/2014
Job End Date:	8/18/2014
State:	West Virginia
County:	Wetzel
API Number:	47-103-02875-00-00
Operator Name:	EQT Production
Well Name and Number:	PNG129 - 514378
Longitude:	-80.64074200
Latitude:	39.55227400
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,312
Total Base Water Volume (gal):	6,758,997
Total Base Non Water Volume:	295,892



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Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	FTSI	Carrier	Water	7732-18-5	100.00000	90.04535	
Sand	FTSI	Proppant	Crystalline Silica	14808-60-7	100.00000	9.58691	
Hydrochloric Acid 15%	FTSI	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.03534	
FRW-600	FTSI	Friction Reducer	Hydrotreated light distillate	64742-47-8	30.00000	0.02393	
			Ammonium acetate	631-61-8	6.00000	0.00479	
B-10	FTSI	Buffer Agent	Potassium carbonate	584-08-7	48.00000	0.00465	
			Potassium hydroxide	1310-58-3	20.00000	0.00194	
CS-500-SI	FTSI	Scale Inhibitor	Ethylene Glycol	107-21-1	10.00000	0.00374	
HVG-1	FTSI	Gel	Petroleum Distillate	64742-47-8	55.00000	0.00183	
			Guar Gum	9000-30-0	50.00000	0.00166	
			Surfactant	68439-51-0	2.00000	0.00007	
			Clay	14808-60-7	2.00000	0.00007	

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CI-150	FTSI	Corrosion Inhibitor				
			Organic amine resin salt	Proprietary	30.00000	0.00012
			Ethylene Glycol	107-21-1	30.00000	0.00012
			Isopropanol	67-63-0	30.00000	0.00012
			Dimethylformamide	68-12-2	10.00000	0.00004
			Aromatic aldehyde	Proprietary	10.00000	0.00004
			Quaternary ammonium compound	Proprietary	10.00000	0.00004
CIO2	Neptune	Biocide				
			Chlorine Dioxide	10049-04-4	100.00000	0.00044
FE-100L	FTSI	Iron Control				
			Citric Acid	77-92-9	55.00000	0.00044
APB-1	FTSI	Gel Breaker				
			Ammonium Persulfate	7727-54-0	95.00000	0.00007
NE-100	FTSI	Non-Emulsifier				
			2-Butoxyethanol	111-76-2	10.00000	0.00003
			2-Propanol	67-63-0	10.00000	0.00003
			Dodecylbenzenesulfonic acid	27176-87-0	5.00000	0.00001

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

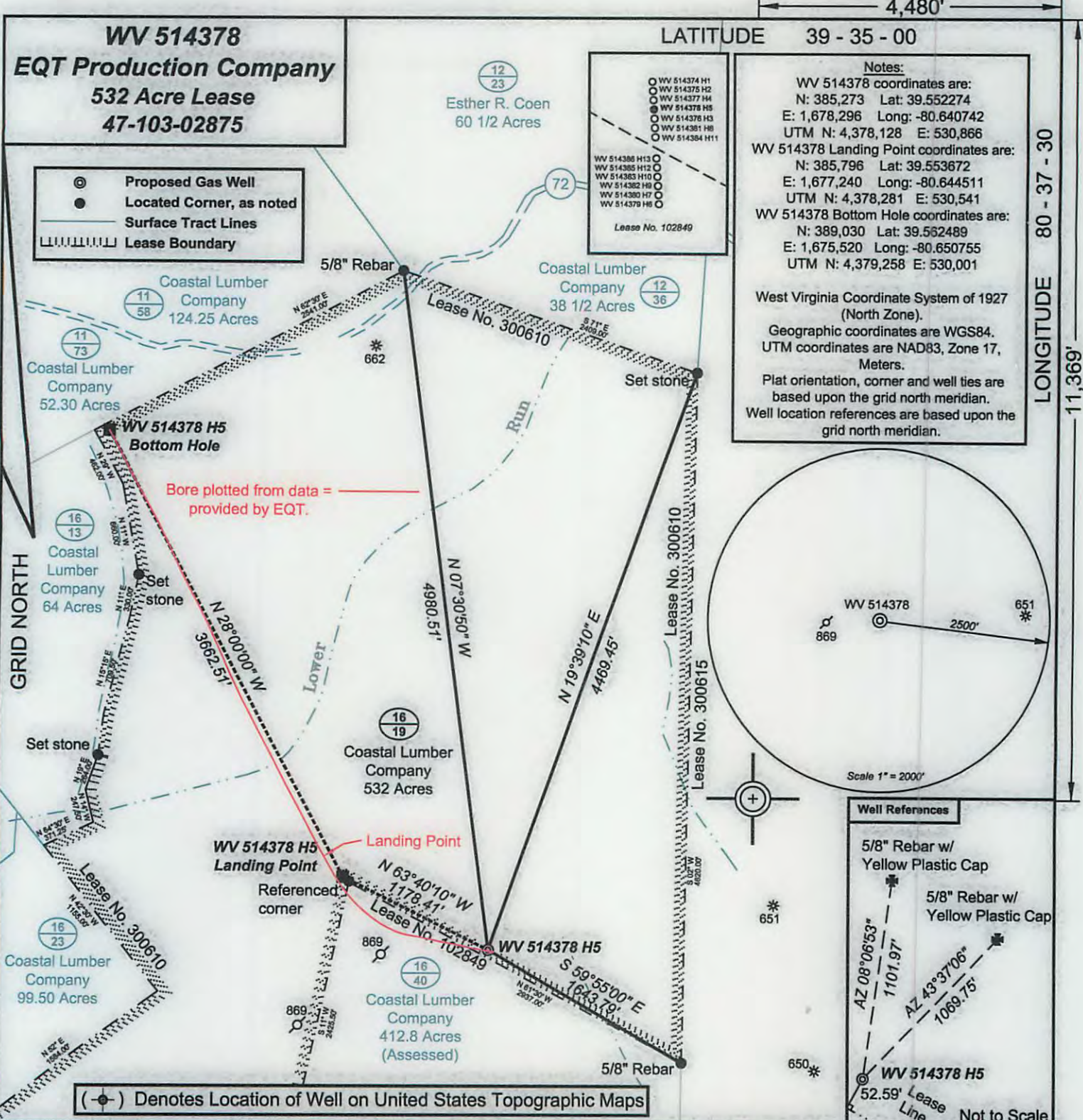
* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

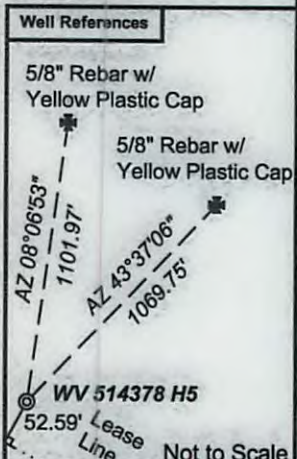
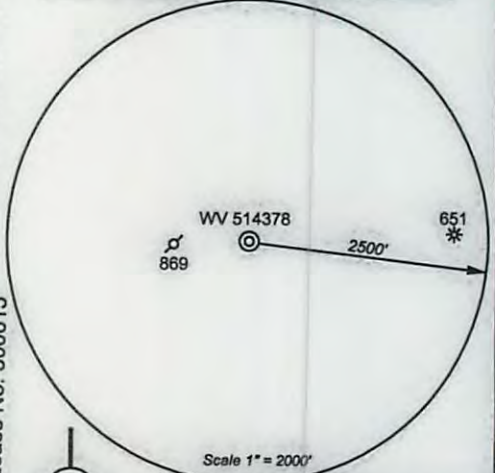
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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Office of Oil & Gas
DEC 18 2014



Notes:
 WV 514378 coordinates are:
 N: 385,273 Lat: 39.552274
 E: 1,678,296 Long: -80.640742
 UTM N: 4,378,128 E: 530,866
 WV 514378 Landing Point coordinates are:
 N: 385,796 Lat: 39.553672
 E: 1,677,240 Long: -80.644511
 UTM N: 4,378,281 E: 530,541
 WV 514378 Bottom Hole coordinates are:
 N: 389,030 Lat: 39.562489
 E: 1,675,520 Long: -80.650755
 UTM N: 4,379,258 E: 530,001

West Virginia Coordinate System of 1927 (North Zone).
 Geographic coordinates are WGS84.
 UTM coordinates are NAD83, Zone 17, Meters.
 Plat orientation, corner and well ties are based upon the grid north meridian.
 Well location references are based upon the grid north meridian.



I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

[Signature]
 P.S.: 2092



FILE NO: 204-34-G-12 EQT PNG 129
 DRAWING NO: 204-12 PNG 129 H5
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY: 1:2500
 PROVEN SOURCE OF ELEVATION: NGS CORS Station

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: March 25 20 14
 OPERATOR'S WELL NO. WV 514378
 API WELL NO
 47 - 103 - 02875
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: Ground: 1361' Proposed: 1329.50' WATERSHED Upper Run of South Fork of Fishing Creek QUADRANGLE: Pine Grove
 DISTRICT: Grant COUNTY: Wetzel
 SURFACE OWNER: Coastal Lumber Company ACREAGE: 532
 ROYALTY OWNER: Waco Oil & Gas Co., Inc. LEASE NO: 300610 ACREAGE: 532
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: TVD: 7,700' MD 13,600'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray
 ADDRESS: 1710 Pennsylvania Avenue ADDRESS: 1710 Pennsylvania Avenue
 Charleston, WV 25302 Charleston, WV 25302

EQT Production Company
532 Acre Lease
47-103-02875

- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Lease Boundary

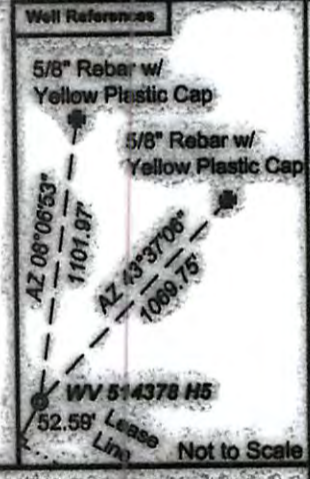
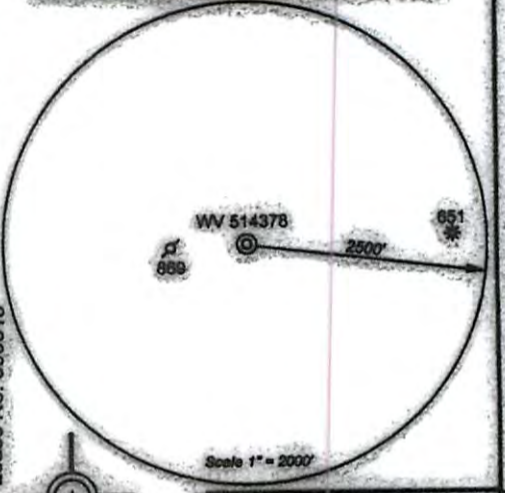
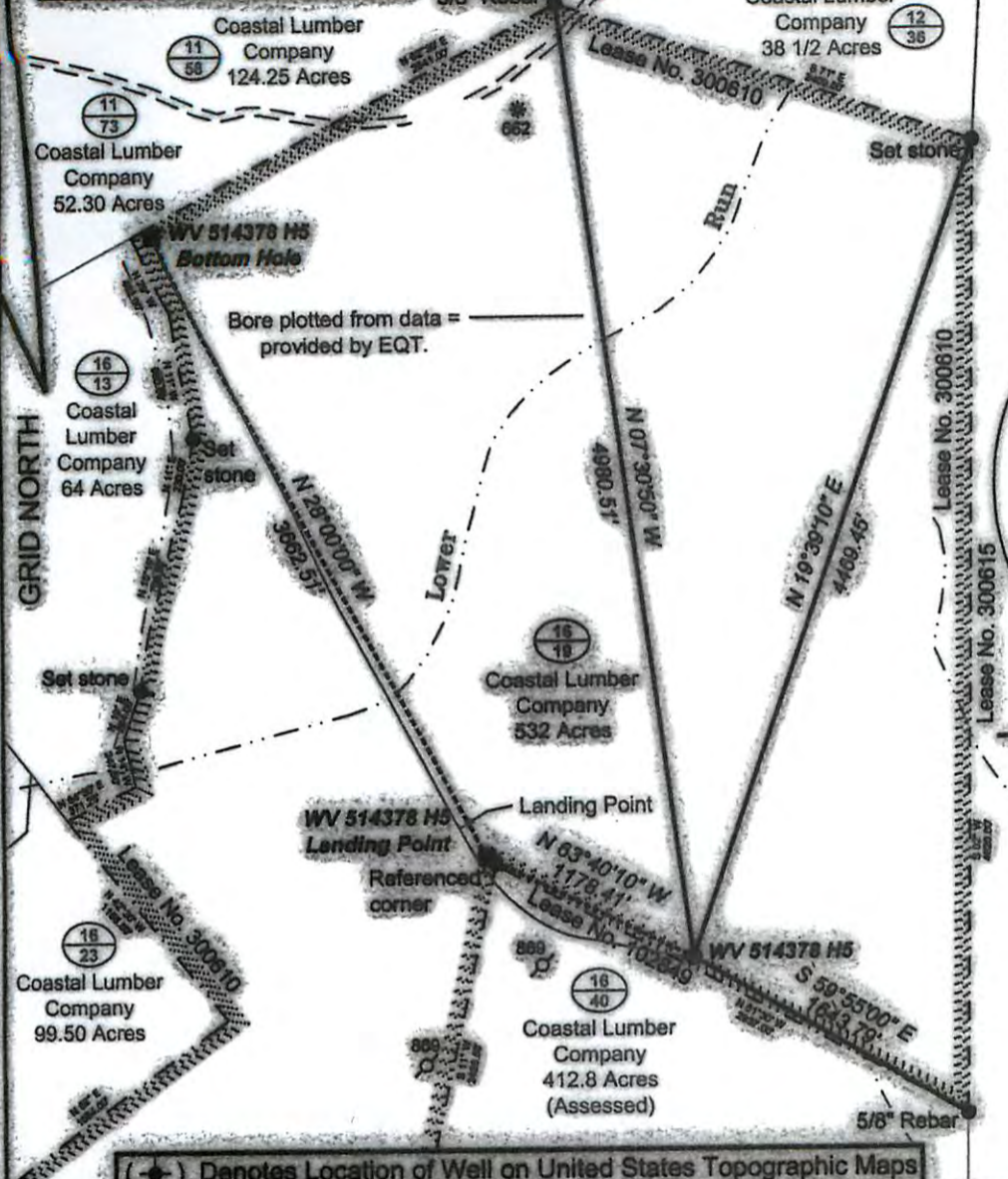
12/23
 Esther R. Coen
 60 1/2 Acres

- WV 514374 H1
 - WV 514374 H2
 - WV 514377 H4
 - WV 514378 H5
 - WV 514378 H3
 - WV 514381 H8
 - WV 514384 H11
- WV 514388 H12
 WV 514389 H12
 WV 514393 H10
 WV 514392 H8
 WV 514380 H7
 WV 514379 H9
- Lease No. 102849

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 Well location references are based upon the grid north meridian.

LATITUDE 39 - 35 - 00
 LONGITUDE 80 - 37 - 30
 11,369



(+) Denotes Location of Well on United States Topographic Maps



I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

Ben R. Singleton
 P.S. 2092



FILE NO: 204-34-G-12 EQT PNG 129
 DRAWING NO: 204-12 PNG 129 H5
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY: 1:2500
 PROVEN SOURCE OF ELEVATION: NGS CORS Station



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 OPERATOR'S WELL NO: WV 514378
 API WELL NO
 47 - 103 - 02875
 STATE COUNTY PERMIT

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 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

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 DISTRICT: Grant COUNTY: Wetzel

SURFACE OWNER: Coastal Lumber Company ACREAGE: 532
 ROYALTY OWNER: Waco Oil & Gas Co., Inc. LEASE NO: 300610 ACREAGE: 532

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 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: TVD: 7,707 MD 13,807

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Rex C. Ray
 ADDRESS: 1710 Pennsylvania Avenue ADDRESS: 1710 Pennsylvania Avenue
 Charleston, WV 25302 Charleston, WV 25302